

Appln No. 10/728,808
Amdt. Dated August 30, 2005
Response to Office Action of June 29, 2005

7

REMARKS/ARGUMENTS

The Office Action has been carefully considered. It is respectfully submitted that the issues raised are traversed, being hereinafter addressed with reference to the relevant headings appearing in the Detailed Action section of the Office Action.

Specification

Page 1 of the specification has been amended to update cross reference to related application information. The Applicant submits that no new matter is introduced.

At line 5 of page 6 of the specification, the description incorrectly refers to Figure 20 relating to misaligned caps being attached to the wafer including MEMS. This reference to Figure 20 should have referred to Figure 7.

A person of ordinary skill in the art would have realised that line 5 of page 6 should have referred to Figure 7 as this is the only drawing showing MEMS misaligned with attached caps.

We have therefore amended line 5 of page 6 to correctly refer to Figure 7.

Claim Rejections – 35 USC § 102

At page 2 of the Office Action, the Examiner has rejected claims 1, 5 to 7 and 15 to 17 as being anticipated by Miyajima (US Patent Number 6,350,113).

Claim 1 has been amended to incorporate the subject matter of claims 3 and 5. Subsequently, claims 3 and 5 have been cancelled. Furthermore, the preamble of the claim has been amended to specify "A separable two part mold for forming wafer scale caps to be attached to a wafer". Support for "separable" can be found at lines 4 to 17 of page 10 of the specification and also Figure 16. We believe that this was an implied limitation of the claim, however, we have explicitly included the word to clarify the scope of the claim without introducing any new matter. Support for "to be attached to a wafer" can be found at lines 22 to 28 of page 10 of the specification and also Figure 19. We believe that this was an implied limitation of the claim as the caps are stated as "wafer scale caps" therefore implying the

Appln No. 10/728,808
Arndt. Dated August 30, 2005
Response to Office Action of June 29, 2005

8

caps are to be attached to a wafer after formation. However, we have explicitly included the limitation to clarify the claim without introducing any new matter.

As the Examiner stated on page 5 of the Office Action that Miyajima fails to show all the features of claim 3, we respectfully request this rejection be withdrawn.

Claim Rejections – 35 USC § 103

At page 5 of the Office Action, the Examiner rejects claims 2 to 4, 11, 12 and 18 to 20 as being unpatentable over Miyajima in view of Cordes et al (US Patent Number 6,390,439). As the subject matter of claim 3 and 5 has been incorporated into claim 1, the patentability of amended claim 1 is discussed in relation to this objection. Reconsideration and withdrawal of this rejection is respectfully requested in light of the following comments.

Obviousness can only be established by combining or modifying teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

In particular, the MPEP states at §2143 "*Basic Requirements of a Prima Facie Case of Obviousness*" that:

"... three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

Appln No. 10/728,808
Amdt. Dated August 30, 2005
Response to Office Action of June 29, 2005

9

The Examiner states that it would have been obvious to one of ordinary skill in the art to form the wafer and mold of Miyajima from silicon in order to provide a semiconductor as required by Miyajima and provide CTE matching thereby eliminating shifting as taught by Cordes et al.

However, this statement overlooks the fact that Miyajima is a separable mold whereas in total contrast Cordes et al describes a mold which is not separable after molding is completed (ie. the face plate and backing plate are not separated from each other after the molding has been completed). As will be noted, Cordes et al and Miyajima are two very distinct molds which a person skilled in the art would not be motivated to combine. This is particularly true with Cordes et al which describes a mold (face plate and backing plate) that is integral with the molded product. As such the mold described by Cordes et al would not be seen as a suitable choice for forming caps that are to be attached to the wafer as the plates cannot be separated from the molded product.

Claim 1 specifies that the molds are separable such that caps formed can be attached to a wafer. Furthermore, the cavities defined by the separable molds have a spacing that corresponds to a spacing provided on a wafer. Due to the wafer and mold being made from the same material, any expansion or contraction of the mold results in the same expansion as the wafer, and therefore when the formed caps are attached to the wafer after molding, the spacing between the caps corresponds to the spacing on the wafer.

The problem overcome by the relationship between the materials used for the molds and the wafer as well as the spacing between the cavities and formed caps is highlighted at lines 2 to 14 of page 6. Misalignment of the caps with MEMS devices on the wafer due to different expansion rates of the wafer and mold can result in the damaging the MEMS when the caps are attached to the wafer.

Neither Miyajima nor Cordes et al attempt to solve the problem of attaching caps to a wafer wherein the spacing of the formed caps is critical so as to not damage MEMS on the wafer. The Examiner contends that Miyajima describes a wafer, however has failed to point out any part of the specification which describes that the resin products are formed in a spaced relationship corresponding to a spaced relationship provided on a wafer.

Appln No. 10/728,808
Amdt. Dated August 30, 2005
Response to Office Action of June 29, 2005

10

As such, the first requirement of a Prima Facie Case of Obviousness for amended claim 1 is not satisfied in regard of Miyajima in view of Cordes et al as there would be no suitable motivation for a person of ordinary skill in the art to combine a document teaching separable molds with a document teaching a mold integral with the molded product.

Furthermore, the second requirement of a Prima Facie Case of Obviousness for amended claim 1 is not satisfied in regard of Miyajima in view of Cordes et al as there is no reasonable expectation of success that the two documents could be combined. Cordes et al and Miyajima fail to provide any suggestion that a technique for molding a product integral with the mold could be used with a separable mold.

Additionally, the third requirement of a Prima Facie Case of Obviousness for amended claim 1 is not satisfied in regard of Miyajima in view of Cordes et al as the combined references do not teach or suggest all the claim limitations. In particular, the combined references fail to teach or suggest that the defined cavities define a spacing which corresponds to a spacing provided on the wafer which the formed caps are to be attached.

In regard to the Examiner's footnote on page 3 of the Office Action, we believe that the amendments to the claim include all essential structural cooperative relationships of the elements, such as the spaced relationship between the cavities and the wafer.

In regard to the Examiner's comment in paragraph 4 regarding the intended use limitation does not impart patentability, we respectfully submit that amended claim 1 does include patentability due to the spaced relationship of the cavities corresponding to a spaced relationship provided on the wafer. Furthermore, the structure of the molds are patentable. For example the feature of the spacing of the mold corresponding to the spacing provided on the wafer is material to the structure of the mold. Furthermore, the material of the mold being the same as the material of the wafer is not immaterial to the structure of the mold as this attempts to overcome problems associated with different rates of expansion of the mold and wafer. As such, claim 1 includes patentable limitations which are material to the structure of the mold.

Reconsideration and withdrawal of the rejection is respectfully requested.

Appln No. 10/728,808
Amdt. Dated August 30, 2005
Response to Office Action of June 29, 2005

11

CONCLUSION

In view of the foregoing, it is respectfully requested that the Examiner reconsider and withdraw the rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103(a). The present application is believed to be in condition for allowance. Accordingly, the Applicant respectfully requests a Notice of Allowance of all the claims presently under examination.

Very respectfully,

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